

ABSTRACT OF THE DISCLOSURE

The present invention is to provide a phosphor of minimum particle size having an excellent crystallinity and a high brightness higher than conventional crude
5 particles, which is usable for a highly precise display, a highly bright illuminating element or illuminating apparatus, a high speed immunoassay system or the like, i.e. a phosphor having a substantially spherical outer shape, which comprises primary particles having a median
10 diameter D_{50} in a range of from $0.05\ \mu\text{m}$ to $1\ \mu\text{m}$ and secondary particles having a median diameter D_{50} in a range of from $0.1\ \mu\text{m}$ to $2\ \mu\text{m}$, wherein at least 50 vol% of the total secondary particles has an aspect ratio of at least 0.8 and an internal quantum efficiency is in a
15 range of from 0.8 to 1.